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| APPLICATION NO.  | FILING DATE        | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                 | CONFIRMATION NO.       |
|--|--------------------|----------------------|-------------------------------------|------------------------|
| 10/596,102   | 05/30/2006         | Deuk Soo KIM         | 2017-016                            | 1999                   |
| 53706<br>IPLA P.A.<br>3580 WILSHIRE BLVD.<br>17TH FLOOR<br>LOS ANGELES, CA 90010 | 7590<br>07/17/2008 |                      | EXAMINER<br>BOATING, ALEXIS ASTEDUA |                        |
|  |                    |                      | ART UNIT<br>2838                    | PAPER NUMBER           |
|  |                    |                      | MAIL DATE<br>07/17/2008             | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/596,102

**Applicant(s)**

KIM, DEUK SOO

**Examiner**

Alexis Boateng

**Art Unit**

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 5/30/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 – 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odahhara (U.S. 2002/0161537) in view of Alwardi (U.S. 5,965,997).

**Regarding claims 1, 4 – 7, 9, and 10**, Odahhara discloses wherein a circuit for measuring the cell post voltage and internal impedance voltage in storage battery cells, comprising:

High Input Common Mode Voltage Differential Amplifier (paragraph [0040]; figure 2 item 66) and;

Reference Constant Voltage Circuit (paragraph [0055]) and;

Buffer Circuit (figure 2 item 69) and;

A/D converter and CPU (figure 2 item 62 paragraph [0038]). Odahhara does not disclose the remainder of the claim. Alwardi discloses wherein in figure 3 wherein items 106 – 108 make up an operational amplifier group. Alwardi further discloses in column 16 lines 21 - 43 wherein a low pass filter is used. It is obvious that this could be modified to be a band pass filter and a direct current filter. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the Odahhara system with the Alwardi system so

that certain voltage levels and current levels are filtered so that the system is not damaged.

**Regarding claims 2 and 3**, Odahara discloses does not disclose wherein A/D converter and CPU are replaced by A/D converter consisting of Multiplexer (MUX) circuit with a number of input channels and ADC circuit, and CPU. Alwadi discloses in figure 12 item 386 and column 20 lines 54 – column 21 lines 15 wherein a multiplexer circuit is used with the CPU. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Odahara reference with the Alwadi reference so that multiple data signals may be effectively sent.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Odahara (U.S. 2002/0161537) in view of Alwadi (U.S. 5,965,997) as applied to claim 7, and in further view of Frey (U.S. 5,708,348).

**Regarding claim 8**, Odahara and Alwadi do not disclose the invention as claimed. Frey discloses in column 4 lines 55 – column 5 line 9 wherein zener diodes and a current limiting resistor is used within the system. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Odahara and Alwadi system with the Frey system so that the constant voltage is controlled.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ullah Akm can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB

*/Bao Q. Vu/  
Primary Examiner, Art Unit 2838  
July 15, 2008*